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ABSTRACT

Project CELSIM (Career Education and Learning Strategies Implementation Model) had as its primary goal the provision of supplemental bilingual special education with a particular emphasis on the acquisition of learning strategies. The learning strategies approach was designed to improve cognitive functions, infuse career awareness, and help students understand the cultural dimensions of the workplace, as well as to identify specific areas of career interest. The program included computer literacy and extracurricular activities such as trips and guest speakers. The project served 137 Spanish-speaking special education students of limited English proficiency. Project CELSIM met its objectives for staff development, counseling, career education, and Native Language Arts, but failed to meet its objectives for content area subjects, attendance, or curriculum development. The English-as-a-Second-Language objective could not be assessed. This evaluation report describes the evaluation methodology, the project's implementation and attainment of objectives, outcomes, and conclusions and recommendation. (JDD)

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OREA Report

EVALUATION SECTION REPORT

CAREER EDUCATION AND LEARNING STRATEGIES
PROJECT CELSIM
Grant Number T003A80979

1988-89

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EVALUATION SECTION
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April 1990

EVALUATION SECTION REPORT

CAREER EDUCATION AND LEARNING STRATEGIES
PROJECT CELSIM
Grant Number T003A80979

1988-89

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CAREER EDUCATION AND LEARNING STRATEGIES IMPLEMENTATION MODEL (PROJECT CELSIM) 1988-89

SUMMARY

- Project CELSIM was fully implemented. The project provided special education students of limited English proficiency with supplementary instruction in English as a Second Language, Native Language Arts, content area subjects, courses in computer literacy and career awareness, and counseling. It also engaged in staff and curriculum development activities.

- Project CELSIM met its staff development, counseling, Native Language Arts, and career education objectives. It failed to meet objectives in content area subjects, attendance, or curriculum development. It was not possible to determine whether the project met the English as a Second Language objective.

Career Education and Learning Strategies Implementation Model (Project CELSIM) was in its first year of a three-year Elementary and Secondary Education Act (E.S.E.A.) Title VII funding cycle. Project CELSIM's primary goal was to provide supplemental bilingual special education, with a particular emphasis on the acquisition of learning strategies. The learning-strategies approach was designed to improve cognitive functions, infuse career awareness, and help students understand the cultural dimensions of the workplace, as well as to identify specific areas of career interest. The program included computer literacy and extracurricular activities such as trips and appearances by guest speakers. The project served 137 Spanish-speaking special education students of limited English proficiency (LEP students) at James Monroe, Theodore Roosevelt, and William H. Taft High Schools in the Bronx.

Project staff designed programs to promote growth of language abilities and career awareness. An important aspect of these programs was to help teachers incorporate learning skills instruction into the standard subject matter. A primary focus of Project CELSIM was to provide counseling to participating students.

Project CELSIM met its objective for staff development, counseling, career education, and Native Language Arts, but failed to meet its objectives for content area subjects, attendance, or curriculum development. The English as a Second Language objective could not be assessed as stated, because data were inadequate for this specialized population.

The conclusions, based on the findings of this evaluation, lead to the following recommendations:

- Make objectives more realistic for the targeted population.
- If funds permit, increase the time devoted to the program by the career and curriculum specialist at William H. Taft High School.

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I. INTRODUCTION

This report documents the Office of Research, Evaluation, and Assessment's (OREA's) evaluation of the 1988-89 bilingual special education program, Career Education and Learning Strategies Implementation Model (Project CELSIM). Project CELSIM, funded by Title VII of the Elementary and Secondary Education Act (E.S.E.A.), served 137 Spanish-speaking special education students of limited English proficiency (LEP students). The Bilingual/E.S.L. Unit of the Division of High Schools (D.H.S.) and the Division of Special Education (D.S.E.) of the New York City Board of Education operated the project at James Monroe, Theodore Roosevelt, and William H. Taft High Schools in the Bronx.

The program provided students with supplemental services in English as a Second Language (E.S.L.), Native Language Arts (N.L.A.), and the content areas, using a learning-strategies approach to enable students to maximize existing academic skills. The program also helped students prepare to enter the work force, offering computer literacy instruction in its career-oriented component. The program also proposed to develop learning strategies materials for students as well as to train teachers in this approach.

HISTORY OF THE PROGRAM

Project CELSIM completed its first year of a three-year cycle in 1988-89. Its main goal was to provide programming designed to meet the specific needs of bilingual (Spanish)

special education students. These students had not previously received Title VII services and were historically a greatly underserved group. Project CELSIM was implemented at James Monroe, William H. Taft, and Theodore Roosevelt High Schools in the Bronx. These three schools had large concentrations of Spanish-speaking LEP special education students.

SETTING

The area surrounding William H. Taft High School in the South Bronx is very dilapidated. Boarded-up and abandoned buildings are within sight of the school. James Monroe High School, also in the South Bronx, is in a slightly better neighborhood. Theodore Roosevelt High School is in a more attractive residential area of the North Bronx.

PARTICIPATING STUDENTS

Approximately 20 percent of the targeted students had been in the United States for less than two years. In addition to having identifiable cognitive/language needs, they were experiencing the difficulties of adjusting to a new culture.

These students were very low achievers, typically scoring below the tenth percentile on achievement tests in reading, written language, and mathematics. Half were over-age for their grade level, and all came from low-income families. Students were hampered by illiteracy in their native language, responsibility for sibling care, and pregnancy.

STAFF

Project CELSIM's Title VII staff included a director, deputy director, project coordinator, guidance counselor, staff development specialist, and four career and curriculum specialists. The principals and assistant principals of special education at each site aided the project staff. A bilingual guidance counselor visited all sites but did not have designated office space at any of the schools, making it difficult to meet with students.

The career and curriculum specialist at James Monroe High School had been a paraprofessional for eight years before becoming a teacher in the special education department. She held two master's degrees, taught N.L.A., and had been instrumental in setting up the bilingual component of the special education department.

Two half-time career and curriculum specialists served at Theodore Roosevelt High School. One had taught both special education and mainstream students and was expecting to complete his master's degree during the summer of 1989. He taught computer literacy and art education and was manager of the Comprehensive Competencies Program's (C.C.P.'s) Learning Center. The other career and curriculum specialist had teaching experience in Puerto Rico and on the mainland. She had a master's degree and was enrolled in a program for a second master's degree.

The career and curriculum specialist at William H. Taft High School worked only one-quarter time. He had been a special education teacher for a number of years and was a work/study teacher, supervising students in an on-the-job training program at Bronx Lebanon Hospital. The small amount of time he served at the high school precluded his helping all the students who needed his services.

The project director noted that the project lacked an office aide and badly needed one. She stressed that the addition of an office aide from the community would be particularly helpful. She also noted that there were not enough paraprofessionals in content area courses and special programs.

DELIVERY OF SERVICES

Project CELSIM provided various services for students. Each site offered E.S.L. and N.L.A. courses. Content area courses were taught in the native language or with E.S.L. techniques.

The program's bilingual guidance counselor provided career counseling, worked with potential dropouts and counseled students on drug awareness, self-esteem, goal setting, and conflict resolution. She also counseled parents on the problems of parent-child interaction and child abuse, and offered career information. The project offered career-oriented activities, including the use of computers and video equipment.

Project CELSIM offered staff development activities, and project staff developed curricula.

REPORT FORMAT

This report is organized as follows: Chapter II outlines the evaluation methodology; Chapter III describes the project's implementation and evaluates the attainment of its implementation objectives; Chapter IV presents the outcomes of the project; and Chapter V offers conclusions and recommendations based on the findings of this evaluation.

II. EVALUATION METHODOLOGY

EVALUATION QUESTIONS

The evaluation assessed two major areas: program implementation and outcome. Evaluation questions included the following:

Process/Implementation

- How did the program select students?
- Did the project implement the instructional activities for developing English language proficiency as proposed?
- Did the project implement activities to enable students to increase their Spanish reading ability?
- What percentage of staff members participated in teacher training conferences and workshops?
- What instructional units did the curriculum resource specialist develop?

Outcome

- What was the average Normal Curve Equivalent (N.C.E.) gain on the Language Assessment Battery (LAB)?
- What was the average gain in native language reading skills exhibited by program students?
- What percentage of program students passed their courses in mathematics, science, and social studies?
- What percentage of students showed a significant improvement in occupational aspiration?
- What were the attendance rates of participating students compared to those of mainstream students?
- How frequently did project students meet with the bilingual guidance counselor?

EVALUATION PROCEDURES

Sample

An OREA field consultant interviewed the project director and observed classes at two of the project sites. OREA provided a student data form for each student. Project CELSIM returned 111 completed forms.

Instruments

Instruments included an OREA-developed project director questionnaire and interview and observation guides for the field consultant's use. Project personnel completed OREA-developed student data forms on program participants.

Data Collection

A field consultant from OREA interviewed program and school staff and observed classes in the spring semester. OREA gave a questionnaire and student data forms to the project director in December 1988 and May 1989; completed forms and questionnaires were returned at the end of each semester.

Data Analysis

OREA used the Language Assessment Battery to assess improvement in English proficiency. Project CELSIM students were tested at grade level each spring. Students' raw scores were converted to Normal Curve Equivalent (N.C.E.) scores, which have multiple advantages over other scoring methods. They are standard, normalized, and form an equal interval scale. ("Standard" indicates that the unit of measurement is a fraction

of the standard deviation of the original distribution of raw scores; "normalized" refers to the fact that the scale is adjusted for the norm group so that its distribution has the shape of a normal distribution; and "equal interval scales" allow for legitimate aggregation or averaging of scores.) Project students' N.C.E.s indicated their standing in relation to the national average of 50.

To assess the significance of students' achievement in English, OREA computed a correlated t-test on LAB N.C.E. scores. The t-test determined whether the difference between the pre- and posttest scores was significantly greater than would be expected by chance variation alone.

To insure representative achievement data, OREA included only those students who had been in the program for at least five months and had attended classes for at least 100 school days. OREA extrapolated to estimate full-year scores of late-arriving and early-exiting students.

Limitations

Since all LEP students are entitled to receive bilingual and E.S.L. services, OREA was unable to select an equivalent control group. However, the use of two sets of data, as outlined above, served in lieu of a control group.

III. EVALUATION FINDINGS: IMPLEMENTATION

STUDENT PLACEMENT AND PROGRAMMING

Students were eligible for the project if they scored below the twenty-first percentile on the Language Assessment Battery (LAB).* The project targetered students diagnosed as learning disabled (through psychoeducational assessment by qualified bilingual clinicians).

INSTRUCTIONAL ACTIVITIES

Project CELSIM provided instructional activities in E.S.L., N.L.A., content area subjects, and career education.

English as a Second Language

Project CELSIM designed its E.S.L. services to provide the basic instructional modifications and adaptations prescribed within a service category, the linguistic elements necessary for academic success, and the activities required to develop English language skills.

Theodore Roosevelt High School offered elementary, intermediate, and advanced level E.S.L. courses, as well as elementary and intermediate E.S.L. reading. James Monroe High School provided students with an elementary and intermediate

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* The Language Assessment Battery (LAB) was developed by the Board of Education of the City of New York to measure the English-language proficiency of non-native speakers of English in order to determine whether they can participate effectively in classes taught in English. Students scoring below the twenty-first percentile on the LAB are entitled to bilingual and E.S.L. services.

level E.S.L. course and also one general course in E.S.L. reading. E.S.L. classes at William H. Taft High School were on three levels--beginning, intermediate, and advanced.

The OREA field consultant observed an elementary E.S.L. class at James Monroe High School. The class was held in a spacious and bright computer room which displayed printed materials in English. Materials focused on reading and writing skills. Computer software served as the main instructional material. Students worked in pairs on a reading passage. The teacher interacted with students, asked and answered questions, and gave them feedback. The teacher and students used both English and Spanish.

The project director noted that more teachers specifically trained in E.S.L. techniques were needed. In some cases, bilingual teachers taught E.S.L. classes because there were no E.S.L. teachers available.

Native Language Arts

All sites offered two levels of Spanish language arts. Project CELSIM tried to infuse the newest learning techniques into these classes. By adding native language literature to the curricula, the project hoped to relate the course matter to students' lives. Project staff also used teaching techniques like reader response and reader logs to involve students.

The OREA consultant observed an advanced N.L.A. class at James Monroe High School. Class materials were in Spanish and included books of short stories and legends. A tape recorder and

video were available. The teacher developed cultural activities with the students.

Content Area Subjects

Project CELSIM offered mathematics, science, and social studies classes. The project's mathematics curriculum included fundamentals of mathematics and sequential mathematics. The science curriculum consisted of general science, biology, and health science classes. In social studies, students took global studies, American government, economics, and American history--the full sequence necessary for graduation. Teachers integrated lessons on the students' native cultures and histories into the content areas. The project director noted a need for more bilingual paraprofessionals to assist with content area classes.

Career Awareness Education

The project infused career-oriented lessons into E.S.L., N.L.A., and content area classes. While building language skills, students learned about interviews, application forms, and how to behave in a business office. The project developed a two-week lesson plan focusing on careers and introduced it into the E.S.L. or N.L.A. classes at each site. In the content areas, teachers made a point of relating mathematics, science, and other subjects to the work world.

NONINSTRUCTIONAL ACTIVITIES

The project proposed noninstructional implementation objectives in staff and curriculum development.

Staff Development

The objective for staff development was:

- By the end of the first year of the project, 85 percent of the project staff members will have participated in 90 percent of the teacher training conferences and workshops.

Project CELSIM offered staff development workshops and meetings designed to increase knowledge and improve skills in learning strategies and in teaching E.S.L., N.L.A., and career education. Topics discussed during these sessions included: E.S.L. and N.L.A. materials, E.S.L. methodology, E.S.L. in the content areas, different teaching styles in bilingual classes, bilingual content area materials, multicultural sharing, communicative language, the high dropout rate for Hispanic students, use of computer software in E.S.L./bilingual classes, bilingual computer software, and innovative video.

Project teachers and staff found it difficult to attend workshops given during school hours. The project director, therefore, emphasized staff development on weekly site visits, when she would coach teachers in the classroom.

Still, the project director reported that the coordinator and the resource specialists attended all of the formal staff development workshops. These included a three-session introduction to the program, four computer demonstration classes, and a three-session workshop on the high dropout rate for Hispanic students. The project met its objective for staff development.

Curriculum Development

The program objective for career development was:

- By the end of the first year, the curriculum resource specialist will have developed four instructional units, one in each of the content areas, utilizing a learning strategies approach and career infusion technologies.

Although the curriculum development objective called for new units in the content areas, the project director said that was not possible. The three resource specialists were only licensed in E.S.L. or N.L.A., and she did not want them developing materials outside their specialties. Therefore, Project CELSIM failed to meet this objective.

At Theodore Roosevelt High School, the project staff developed a two-week career-oriented unit that was used in E.S.L. classes. The James Monroe High School resource specialist developed a similar unit for use in N.L.A. classes. At William H. Taft High School, staff developed an instructional unit on video careers.

IV. EVALUATION FINDINGS: OUTCOMES

INSTRUCTIONAL ACTIVITIES

The project proposed instructional objectives in E.S.L., N.L.A., content area subjects, and career awareness education.

English as a Second Language

The evaluation objective for the development of English language skills was:

- By June 1989, 70 percent of the participating students will show statistically significant gains in English language proficiency, as measured by the LAB.

Project CELSIM provided complete LAB pre- and posttest scores for 61 students in grades nine through twelve. Because of the small sample and the special population targeted by this project, OREA could not assess the objective as proposed.

Native Language Arts

The evaluation objective for the development of Spanish reading skills was:

- As a result of participating in the program, students will show significant gains in Spanish reading achievement.

The project submitted data for 24 students who took La Prueba de Lectura. The mean score was 26.3 (s.d.= 11.3). The posttest mean was 28.0 (s.d.= 8.9). The mean gain was 1.7 (s.d.= 6.9). Approximately two-thirds (62.5 percent) of the students showed a gain. As this was more than half the sample, it can be concluded that Project CELSIM met its N.L.A. objective.

Content Area Subjects

The evaluation objective for content area subjects was:

- At least 70 percent of the students enrolled in the content area classes will score at or above the passing criterion of 65.

Overall, program students met this objective in social studies and business in the fall only and almost met it in mathematics and science in the same semester. (See Table 1.) Project CELSIM did not meet the content area objective.

Career Awareness Education

The evaluation objective for career awareness education was:

- As a result of participating in the career awareness/ exploration class, 70 percent of enrolled students will show a significant improvement in occupational aspiration.

Project CELSIM administered a career exploration/awareness test in November and May. Complete data were available for 35 students. The mean posttest was 62.3 (s.d.= 17.3), and the mean posttest was 67.4 (s.d.= 18.4). This gave a mean gain of 5.1 (s.d.=8.5), which was statistically significant. The career awareness education objective was met.

NONINSTRUCTIONAL ACTIVITIES

Attendance

The program objective for attendance was:

- As a result of participation in the program, students' attendance will be significantly higher than that of the mainstream students.

Since the school's attendance rate included the attendance of program students, OREA determined the statistical significance

TABLE 1

Passing Rates in Content Area Courses

High School	Content Area	Fall		Spring	
		Number of Students	Percent Passing	Number of Students	Percent Passing
W. Taft	Mathematics	7	71.4	10	90.0
	Science	7	57.1	3	66.7
	Social Studies	10	70.0	11	63.6
	Business	13	76.9	4	75.0
T. Roosevelt	Mathematics	37	67.6	34	41.2
	Science	29	69.0	28	75.0
	Social Studies	40	70.0	42	64.3
	Business	21	76.2	29	65.5
J. Monroe	Mathematics	30	70.0	26	53.8
	Science	24	66.7	13	30.8
	Social Studies	28	71.4	24	50.0
	Business	6	66.7	5	60.0
TOTAL	Mathematics	74	68.9	71	62.0
	Science	60	66.7	44	61.4
	Social Studies	78	70.5	77	59.7
	Business	40	75.0	38	65.8

- Project CELSIM students achieved the objective in social studies and business courses only in the fall.

between program and school attendance through the application of a z-test for the significance of a proportion. This procedure tests whether the difference between one proportion (program students' attendance) and a standard proportion (the overall school attendance rate) is greater than can be expected by chance variation.

The attendance rate of program students at William H. Taft High School was 75.4 percent, and the schoolwide rate was 71.5 percent; at James Monroe High School the attendance rate for program students was 77.2 percent, versus 73.1 percent schoolwide; at Theodore Roosevelt High School the attendance rate for program students was 78.5 percent, versus 77.9 percent schoolwide.

The z-test results (z =0.39, 0.55, and 0.10 respectively) indicated that the differences in attendance rates were not statistically significant ($p<.05$). Thus, the program did not meet its attendance objective. However, the attendance rates were meaningfully high for this population and actually higher than those of mainstream students.

Counseling

The program objective for counseling was:

- Participating students will meet with the bilingual guidance counselor at least once monthly.

The guidance counselor met with all participating students each month. Counseling was a major focus of the program. Project CELSIM met its counseling objective.

V. CONCLUSIONS AND RECOMMENDATIONS

In its first year of operation, Project CELSIM provided services to 137 special education LEP students at James Monroe, William H. Taft, and Theodore Roosevelt High Schools in the Bronx. The project provided students with supplementary instruction in E.S.L., N.L.A., and the content areas, as well as career awareness education and counseling. Project CELSIM also offered a variety of staff development activities and created an assortment of curricula.

The project's philosophy was that cognitive limitation did not necessarily reflect lack of capacity but could have evolved from faulty work habits, inadequate modes of thinking, or lack of exposure to intensive quality instruction--all of which could be helped by training.

Because of the small sample size and the specialized population which was targeted for this project, OREA was unable to assess the E.S.L. objective as proposed. Since almost two-thirds of the participating students showed a gain from pretest to posttest on La Prueba de Lectura, the project met its N.L.A. objective. In social studies and business in the fall, 70 percent of participating students passed their content area courses. Close to 70 percent of the students passed science and mathematics courses in the fall. Project CELSIM did not meet the content area objective. The project met its career awareness objective. The attendance rate of program students was not significantly higher than that of mainstream students, therefore

Project CELSIM did not achieve the attendance objective. The bilingual guidance counselor met with all the students every month, and Project CELSIM was successful in achieving the counseling objective. Counseling was a major focus and strength of the program.

At least 85 percent of the project staff participated in a minimum of 90 percent of the training conferences and workshops, allowing Project CELSIM to meet the staff development objective.

Although project staff developed curricula, they did not develop an instructional unit in each of the content areas as proposed since they were not licensed in the content areas. Therefore, Project CELSIM did not achieve the curriculum development objective.

The conclusions, based on the findings of this evaluation lead to the following recommendations:

- Make objectives more realistic for the targeted population.
- If funds permit, increase the time devoted to the program by the career and curriculum specialist at William H. Taft High School.